

REMARKS

In the final Office Action, the Examiner rejected claims 1, 2, 4, 5, 15 and 20 as anticipated by the Dreyer et al. reference, rejected claims 3 and 6 – 9 as obvious over the Dreyer et al. reference in view of the Tanaka reference, indicted that claims 10 – 14 are allowed and indicted that claims 16 - 18 and 21 are objected to for dependence on a rejected base claim but would be allowed if redrafted in independent form.

Allowed Claims

Applicants note with appreciation the indication of allowable subject matter in the present application. The allowed claims 10 - 14 have been amended to clarify the scope of the claims. In particular, the step of distinguishing is performed while the data is in a printer data format and the step of differently processing the variable data and the form data is performed when the data is in a data format based on pixels. Applicant submits that this more accurately claims the invention as disclosed while still claiming subject matter that is allowable over the cited prior art.

35 USC §102(b)

An important distinction is made in the present invention between data that is in a printer specific data format and data that is in a pixel based format. Examples of the printer specific format data from the specification include IPDS and PCL data streams. The data format based on pixels is also referred to in the specification as bitmap based data format, or bitmap information. Data in the printer format may have form indicator information and so facilitates simple recognition of the form data and variable data, whereas data in the bitmap format is readily compressed, for example. The embodiment of the present invention to which

the current claims is directed provides for distinguishing between the form and variable data while in the printer format, converting the data from the printer specific format to a pixel based format, and then differently processing the form data and variable data.

The **Dreyer et al.** reference discloses printing of pieces of mass mail sorted by carrier route to obtain postage discounts for pre-sorted mass-mailings. The reference refers to the printed items as books, but gives the example of a single sheet of paper folded to form a brochure. The mass mail items are finished by auxiliary devices such as folding devices, trimming devices, binding devices, etc., which can foul the printed book from time to time. The operator ordinarily manually reorders the printing of fouled book and then re-sorts the reprinted book to the proper postal route group. Sensors in the Dreyer device detect a fouled book and cause the ruined book to be automatically reprinted so as to avoid the manual re-ordering and re-sorting steps.

Dreyer discloses that the books have fixed data and variable data. In Dreyer, the fixed data is the portion of the text and images that are the same from one mail item to another, while the variable data is the name and address information of the mail recipient and possibly a personalized message to the mail recipient. The variable data is stored in a database. The fixed data is provided as template files. The print run is performed by combining each database entry with the template until all of the database entries have been utilized.

Upon detection of the fouling of a printed item, the Dreyer apparatus makes a log entry identifying the fixed and variable data of the fouled item to be used to reprint the book.

In **Dreyer**, the master and variable page files are created in a page description language which will be merged upon printing (col. 8, lines 9 - 17). The variable data is stored

in a database (col. 8, line 57 - 62). Since databases are used to hold character data, the variable data of the reference is not in a bitmap when stored. Once printing is finished, the page template files (the fixed data) are stored on a storage medium and/or downloaded with the database (the variable data) to the control unit (see col.12, lines 48 - 54). There is no mention of a conversion to a bitmap for the stored data nor of storing the data in a bitmap format.

Dreyer does refer to conversion of the master and variable page files into a bitmap format, but this is for printing the pages with the merged data. The reference does not store the variable data and fixed data in a format based on pixels, as claimed.

By contrast to the cited reference, the present invention seeks to reduce the storage volume for printed publications by achieving a high degree of compression in the archived data. The print data has fixed and variable data, the fixed data being form data. The form data is separated from the variable data and these are stored separately in the archiving system. The distinction between the form data and the variable data is made while the data is in a print data format, and the subsequent processing of the form data and variable data is performed while the data is in a format based on pixels. The form data is stored only once for each job. The forms re-occur in the same way for a specific number of interrelated print data sets (see page 3, lines 3 – 6, of the specification). In other words, the same forms may be used for different documents but are filled with different variable data. Thus, there can be several documents in the print data stream. Further, a press run may have frequently re-occurring identical forms (see page 3, lines 20 - 22). Thus, more than one form data can be used for a press run.

Claim 1 has been amended to incorporate the limitations of claim 3 which depended therefrom. In addition, claim 1 now incorporates the limitations of claim 20 and thereby provides that the data stream is converted from a printer specific format to a format based in pixels. This conversion occurs after the form data is distinguished from the variable data while the data is in the printer data format, and before the differently processing of the form data and the variable data in a data stream based on pixels. Applicant respectfully submits that the claim is directed to an invention that is distinguish over the cited reference.

The claim 1 as now presented is supported in the specification, for example, at page 6, beginning at line 1, of the substitute specification, wherein the text provides, “[a] distinction between form data and variable data preferably ensues in the printer-specific data format, i.e. before the print data stream or, respectively, the affected parts thereof are converted into the pixel-based data format.”

Further, Applicant submits that the additions to claim 1 have been considered before by the Examiner in claims 3 and 20, and earnestly requests entry of the present amendment and consideration of the amended claim.

Claim 15 provides for a raster control in the archiving interface and that the archiving interface differently processes the form data and variable data. The Dreyer reference does not disclose this feature.

As such, the present invention has been shown to be distinguishable over the cited reference.

35 USC 103(a)

The **Tanaka** reference provides a form overlay printing apparatus in which the form data is stored in a data memory and variable data is stored in a buffer. The form data and variable data are converted into printing signals and combined. Only the variable data are sent to the printer.

Even if Tanaka is combined with Dreyer, there is no teaching of the invention as claimed. Thus, the invention is a non-obvious improvement over the prior art, even when considered in combination.

Specification Amendment

An inaccurate passage has been corrected in the patent specification. It appears that it stems at least in part from a translation error in the English translation from the German language PCT application. The corrected passage is now in agreement with the balance of the disclosure and introduces nothing that was not already disclosed in detail in the specification, so the amendment introduces no new matter into the patent application. Acceptance of the amendment and entry thereof is hereby requested.

Conclusion

Applicants respectfully request favorable reconsideration and allowance of the present application.

Respectfully submitted,



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A handwritten signature in black ink, appearing to read "John A. Robinson", is written over a horizontal line.

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